SAMPLE PROGRAM
Sections that are printed in italics are only examples of the information that needs to be entered in that space

Prepared by the
Arkansas Department of Labor
OSHA Industrial Hygiene section

RESPIRATORY PROTECTION PROGRAM

This respiratory protection program has been established to coordinate the use and maintenance of respiratory protective equipment. Respiratory protection may be needed to reduce employee's exposure to chemicals, dusts, or gasses in the work environment. It will assist trained personnel to work safely in hazardous work environments, such as welding, oxygen deficient atmospheres, toxic atmospheres, hazardous materials response, confined space entries, etc.

DESIGNATION OF PROGRAM ADMINISTRATOR:

_____*Rick Shelby, Safety Manager*_____ has been designated to be responsible for the respiratory protection program at this facility. The responsibilities of the program administrator are:

A. Evaluating the hazards in the workplace and identifying jobs that require workers to wear respiratory protection.
B. Selection of respiratory protection options.
C. Establishing a training program for respirator users.
D. Monitoring respirator use and workplace conditions to ensure that respirators are used in accordance with their certifications and training.
E. Conducting annual fit testing procedures.
F. Ensuring proper cleaning, inspection, maintenance, and storage of respiratory protection equipment.
G. Administering the medical surveillance program.
H. Maintaining records required by the respirator standard.
I. Evaluating and updating this written program to assure its continued effectiveness.

SELECTION OF EQUIPMENT

The Program Administrator will select respirators to be used at this facility. The proper selection of respiratory protection equipment must be based on the hazards present in the workplace. The procedures are listed below.

STANDARD OPERATING PROCEDURE FOR SELECTION

1. Determine the type of atmospheric hazard (**Appendix A** of this program lists types of atmospheric hazards).
2. Develop a list of hazardous substances used or produced in the facility. Include chemical exposures that occur during foreseeable emergencies and in confined spaces.
3. Determine the amount of chemical contamination employees could be exposed to (or consider the area as Immediately Dangerous to Life and Health -- IDLH).
4. Determine the percent of oxygen present in the area.
5. Depending on the readings, either an air-purifying or air-supplying respirator can now be selected.

- If the oxygen content is 19.5% or less, air-supplied equipment must be selected (air line, SCBA, etc.).
- If the air contaminant reaches or exceeds the IDLH, air-supplied equipment must be selected.
- If the oxygen content exceeds 19.5% and the contaminating vapor is below the IDLH, then air-purifying equipment with appropriate cartridges can be used.
  - **Types of Respirators Used at** ___*Handy Dandy Company*___**:** Respiratory protective equipment which is approved by the National Institute of Occupational Safety and Health (NIOSH) will be used at this facility. There are __*(how many)*___ basic types of respirators used at this facility. They are:

    Air Purifying: Filter respirators that remove particulates from the air.
    .area of use / specific respirators used in the area
    . grinding area / 3M 2000
    .

    Air Purifying: Chemical cartridge respirators that remove gases or vapors.
    .area of use / specific respirators used in the area
    . paint booth / North 4600
    . stainless welding area / Survivair 6500
    .

    Air-Supplying Respirator: Supplies breathable air from a safe source.
    .area of use / specific respirators used in the area
    . sand blasting room / Bullard hood and air unit
    .

    Self-Contained Breathing Apparatus(SCBA)
    .area of use / specific respirators used in the area
    .

6. Select the filter or cartridge that best protects against the specific chemical or chemicals found in the area of respirator use.

   Dust -- dust respirator or purple cartridges
   Solvents – black cartridge
   Formaldehyde – black cartridge
   Ammonia – green cartridge
   Acid Gas (sulfuric acid) – yellow cartridge
   Welding Fumes – dust, mist, fume mask or purple cartridge (Etc.)

7. Determine the length of cartridge life for each respirator wearer.
   Employees wearing respirators to protect them from dusts and other particulates should change cartridges (or masks) when they first begin to experience difficulty breathing (i.e., more resistance) while wearing their masks.

Cartridges filter chemicals out of the air until they become saturated. Near their saturation point, chemicals begin to leak through the cartridge into the respirator. Employees wearing respirators that utilize cartridges to filter the air must change those cartridges according to the change schedules listed below. The manufacturers of the respirator cartridges we use have informed us of the amount of time the cartridges can be used based on our exposures.

Work Area	Respirator Required / Allowed	Cartridge Change Schedule
Spray Booth	*Half-mask respirator with organic vapor cartridges and dust pre-filters*	*6 hours of use*
Welding / grinding	*Dust, mist, fume respirator*	*8 hours of use*
Wood Shop	*Dust respirator*	*When resistance to breathing is noticeable*
Dip-coating and Drying	*Half-mask respirator with organic vapor cartridges.*	*4 hours of use*
Melt Deck	*Full-face respirator with dust/mist/fume mask*	*10 hours of use*

8. Voluntary Respirator Use.
   Employees may wear respirators in other areas even though their use is not necessary or required. These respirators should be approved for the type of contaminants with which they will be used.

MEDICAL EVALUATIONS

All employees using respirators [except for those voluntarily using filtering facepieces (dust masks)] must pass a medical evaluation before being allowed to wear respiratory equipment. (Employees who refuse the medical evaluation will not be allowed to wear a respirator.) The medical evaluation will be done confidentially through the use of a medical evaluation by a physician or other licensed health care professional at _____ (*clinic or physician name*) .

The program administrator will ensure that employees who wear respiratory equipment receive a medical evaluation before its use.

The medical questionnaire listed in Appendix C of OSHA's Respiratory Protection standard will be used for the evaluation. The physician or other licensed health care professional will be provided with the following information prior to the evaluation.

1. The type and weight of the respirator the employee will use.
2. The duration and frequency of use (including use for rescue and escape).
3. The expected physical work effort.
4. Additional protective clothing and equipment to be worn.
5. Temperature and humidity extremes that may be encountered.
6. A copy of OSHA's respiratory protection standard and a copy of this written respiratory protection program.

Medical evaluations will be repeated whenever:

1. An employee reports medical signs or symptoms that are related to ability to use a respirator;
2. A physician or other licensed health care professional, supervisor, or the respirator program administrator informs the employer that an employee needs to be reevaluated;
3. Information from the respiratory protection program, including observations made during fit-testing and program evaluation, indicates a need for employee reevaluation; or
4. A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result I a substantial increase in the physiological burden placed on an employee.

FIT-TESTING

It is important that the respiratory protective equipment be properly fitted to the employee when it is used.

_____*Rick Shelby, Safety Manager*_____ will ensure that fit-testing is conducted before employees are required to wear respirators and annually thereafter. Fit-testing will be conducted in accordance with the procedures listed in Appendix A of OSHA's respiratory protection standard.

RESPIRATOR USE

It is important that respirators are used correctly to ensure effective respirator operation.

1. Fit checks should be done each time a respirator is put on or adjusted.
   (Note: Cannot be done with disposable dust respirators.)

   Negative Pressure Check
   - Perform a negative pressure fit check by closing off the inlet(s) of the filter cartridge by covering them with the palm of the hand to close off the air passage.
   - Inhale so the facepiece collapses slightly.
   - Hold breath for about 10 seconds.

- If the facepiece remains slightly collapsed and no inward leakage is detected, the respirator is fitted correctly.
- If leakage is detected, the respirator will need to be adjusted and another fit check done.

Positive Pressure Check

- Perform a positive pressure check by closing off the exhalation valve of the respirator by covering it with the palm of the hand to close off the passage of exhaled air.
- Gently exhale into the facepiece
- Hold exhalation for about 10 seconds.
- If slight positive pressure can be built up inside the facepiece without any outward leakage, the fit is correct.

2. Sealing surfaces
   All employees who wear respirators must be clean-shaven and cannot have any other conditions that may affect respirator use. These conditions include: sideburns, partial beards, and moustaches that come between the face and the sealing edges of the mask; temple pieces of glasses that are between the face and the respirator; facial scars, deep skin creases or other facial abnormality; lack of teeth or dentures; etc.

   Employees are permitted to leave the work area to go to the _____(*specific locations*)_____ to maintain their respirator for the following reasons: to clean the respirator if it is impeding their ability to work, change filters or cartridges, replace parts, or to inspect the respirator if it stops functioning as intended. Employees should notify their supervisor before leaving the area.

3. Voluntary Use of Respirators.
   All employees who voluntarily choose to wear respirators will be given a copy of Appendix D of OSHA's respiratory protection standard. Any employee who voluntarily chooses to wear a half- or full-face respirator (other than a dust mask) will be required to participate in the Medical Evaluation, Respirator Use, and Cleaning, Maintenance and Storage sections of this program.

4. Respirator Malfunction
   If any respirator malfunctions at any time, the wearer should inform his/her supervisor and go to a designated safe area to maintain the respirator. The supervisor must ensure that the respirator is functioning properly before it is used again.

5. Emergency Procedures
   The following areas have been identified as having forseeable emergencies:

   Dip Coat Area – malfunction of the ventilation system, leak in supply system.
   When the ventilation system alarm sounds or if a leak in the system is discovered, employees must immediately leave the area and notify

(Emergency Procedures, continued)

Refrigeration – leak in the system.

During all maintenance operations to the refrigeration system all employees must carry their escape respirator on their person. If an emergency situation arises, the respirator must be donned immediately and the area evacuated by all but properly equipped essential personnel.

AIR QUALITY

For supplied-air respirators, only Grade D breathing air can be used in the cylinders. The program administrator will ensure that any air used is certified to meet the specifications of Grade D breathing air. These certifications will be kept in ___*Rick Shelby, Safety Manager's office*_____.

CLEANING AND DISINFECTING

Respirators used for emergency use only are to be cleaned and disinfected on a monthly basis and/or after each use. Documentation of cleaning will be kept in the Safety office.

Respirators issued for the exclusive use of one worker should be cleaned after each days' use (or more often if necessary) by ____*the employee using the respirator*_____.
Respirators will be cleaned in the following location(s): ___*The Safety office or the First Aid room*_____.
The Program Administrator will ensure that an adequate supply of cleaning and disinfecting supplies are available in these locations.

Appendix B-2 of OSHA's Respirator standard requires respirators to be properly cleaned and disinfected in a manner that prevents damage to the respirator and does not cause harm to the user. The following procedure (or the procedure recommended by the manufacturer of a specific respirator) will be used to clean respirators.

A. Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
B. Wash components in warm (110^{o} F maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
C. Rinse components thoroughly in clean, warm (110^{o} F maximum), preferably running water. Drain.
D. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
    1. Hypochlorite solution (50 ppm of chlorine) made by adding approx. one milliliter of laundry bleach to one liter of water at 110^{o} F, or

2. Aqueous solution of iodine (50 ppm iodine) made by adding approx. 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodine/100cc of 45% alcohol) to one liter of water at 110° F, or
3. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.

E. Rinse components thoroughly in clean, warm (110° F maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
F. Components should be hand-dried with a clean lint-free cloth or air-dried.
G. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.
H. Test the respirator to ensure that all components work properly.

INSPECTION PROCEDURES

1. All respirators must be inspected routinely as well as before and after each use.
2. Respirators that are not routinely used (emergency respirators) must be inspected after each use or monthly. An inspection record, that includes inspection dates and the findings, must be kept for all emergency respirators.

An inspection checklist can be found in Appendix B of this program.

REPAIRS AND MAINTENANCE

Equipment in need of repair or readjustment must be returned to _____(*who or where*)__ as soon as possible. Worn, deteriorated, or malfunctioning parts will be replaced before the respirator is used. Only parts recommended by the manufacturer of each respirator will be used. [Repairs to regulators or alarms of atmosphere-supplying respirators will be conducted by the manufacturer.]

RESPIRATOR STORAGE

Respiratory protective equipment must be stored in a way that will assure protection from dust, sunlight, heat, cold, moisture, and damaging chemicals.

Cleaned and dried respirators must be kept individually in re-sealable plastic bags. Respirators should be stored so the facepiece and exhalation valve is in a normal position. Respirators will be kept ___(*locations – i.e. in employee lockers, in the safety office, in the paint department cabinet*)_____.

Respirators must not be left lying out or hanging in the work area, on a workbench, table, in a tool cabinet, or among heavy tools which can cause damage to working parts or can distort the facepiece.

TRAINING

The Program Administrator will provide training to respirator users and their supervisors before respirators are used by employees.

Training will include the following topics:

- _____*Handy Dandy Company*_____ Respiratory Protection Program.
- The requirements of OSHA's Respiratory Protection standard.
- Respiratory hazards encountered at _____*Handy Dandy Company*_____ and their health effects.
- Proper selection and use of respirators.
- Limitations of respirators.
- Respirator donning and user seal (fit) checks.
- Fit-testing.
- Emergency use procedures.
- Inspection, maintenance and storage.
- Medical signs and symptoms limiting the effective use of respirators.

Training will be given annually to all employees required to use respirators. Employees must demonstrate their understanding of the topics covered in the training through _____*hands-on exercises and a written test*_____.

Additional training will be given when there are changes in the workplace or the type of respirator used or when there are indications that the employee's use of or knowledge of the respirator is inadequate.

PROGRAM EVALUATION

The Program Administrator will conduct periodic evaluations of the workplace to ensure that the provisions of this program are being implemented. The evaluations will include consultations with employees who wear respirators and their supervisors, visual inspection of equipment and usage, hazards in the work area (including air monitoring), and a review of this program.

Appendix A
Assessing Atmospheric Hazards

It is important to know something about the different kinds of hazardous atmospheres when determining the need for a respirator.

- Gaseous Contaminants:
  Gaseous contaminants are generally colorless and can combine with the air we breathe. They are usually of two types:
  * Gases such as carbon dioxide and _____. They are solids at low temperatures or liquids at higher pressures. Carbon dioxide is a gas at room temperature, a solid (dry ice) at low temperatures, or a liquid in pressurized tanks.
  * Vapors are like gases. They are formed by vaporization of liquid substances such as ammonia.

- Particulate Contaminants:
  Particulate contaminants are made up of tiny particles of a substance. These particles are often so small that they float around in the air and are easily inhaled. There are three types of particulates:
  * Dust: Solid particles produced by grinding, crushing, sanding, and mixing powder compounds.
  * Mists: Tiny liquid droplets given off when a liquid is sprayed, mixed, or agitated.
  * Fumes: Solid condensation particles of extremely small size, such as from welding.

- Combination of Contaminants:
  Gaseous and Particulate contaminants can often occur together.

- Oxygen Deficient Atmospheres:
  Oxygen deficient atmospheres are classified as immediately dangerous to life or health (IDLH). Examples of potential oxygen deficient locations or situations are chemical tanks, confined spaces, and other poorly ventilated areas. An oxygen deficient atmosphere can happen in two ways:
  * The oxygen is “used up” by a chemical reaction, such as what happens in a fire or when metal inside a tank uses up the oxygen in the process of rusting.
  * The oxygen can be replaced by another gas filling up the area.

- Immediately Dangerous to Life or Health:
  IDLH atmospheres are any atmospheric concentration of any toxic, corrosive, or asphyxiant substance that (1) poses an immediate or delayed threat to life, or (2) would cause irreversible adverse health effects, or (3) would interfere with an individual’s ability to escape from a dangerous atmosphere.

Appendix B
INSPECTION CHECKLISTS

Disposable respirators:

- holes in the filter
- elasticity of the straps
- deterioration of mask as a whole

Air-Purifying respirators:

- Check facepiece for:
  - Dirt
  - Cracks, tears, or holes
  - Distortion of facepiece
  - Loose pieces
- Check head straps for:
  - Elasticity and adjustability
  - Missing straps
- Check inhalation and exhalation valves for:
  - Dust particles, dirt, or detergent residue on valve and valve seat
  - Cracks, tears, or distortion of the valve or valve cover
  - Missing or warped valve covers
- Check filter elements for:
  - Proper filter for the hazard encountered in the work area
  - Missing or worn gaskets
  - Worn threads on filter and facepiece
  - Cracks or dents in filters or the facepiece
  - Deterioration of gas mask canister hose and harness

Air-Supplying respirators:

- Check facepiece, head straps, valves, and breathing lines for possible defects and deterioration.
- Missing or broken connectors or clamps.
- Air supply systems should be checked for:
  - Breathing air quality
  - Breaks or kinks in airline hoses
  - The fitting and tightness of connections
  - Settings of regulators and valves
  - System filters, etc.

RESPIRATOR FIT TESTING RECORD

Name	Fit test method	Respirator Make / Model / Style / Size	Date	QLFT Pass or Fail	QNFT Fit Factor